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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/025,745

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Kiyoshi Hattori

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OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER

RAMPURIA, SHARAD K

ART UNIT

PAPER NUMBER

2683

DATE MAILED: 07/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/025,745

Applicant(s)

HATTORI, KIYOSHI

Examiner

Sharad Rampuria

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5, 8-9, & 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Souissi et al. [US 6167268] (hereinafter Souissi) in view of Song [US 6327471] (hereinafter Song).

1. Regarding claim 1, Souissi disclose a mobile communication terminal (122; fig.2) comprising:

a receiving section (208; fig.2) which receives, from a base station to which the terminal is connected via a radio channel, first position information representing the position of the base station; (col.3; 62-col.4; 4)

a position sensing section (224; fig.2) which senses second position information representing the position of the terminal; (col.3; 62-col.4; 8 & col.5; 4-21)

a distance computing section (230; fig.2) which calculates a distance from the base station to the terminal on the basis of the first position information received by said receiving section and the second position information sensed by said position sensing section; (col.4; 18-27) and

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a determining section (236; fig.2) which determines whether a handoff (preferred system can be replaced; col.7; .4-8) is needed on the basis of the distance calculated by the distance computing section. (col.4; 28-41)

Souissi fails to disclose whether a handoff is needed. However, Song teaches in an analogous art, that whether a handoff is needed. (col.9; 3-14) Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include whether a handoff is needed in order to provide a timely drop-off or smooth handoff to another base station.

2. Regarding claim 2, Souissi disclose the mobile communication terminal according to claim 1, wherein position sensing section includes a satellite signal receiving section which receives a signals from a plurality of distance measuring satellites, and a position computing section which calculates the position of the terminal on the basis of the signals from said plurality of distance measuring satellites received by the satellite signal receiving section. (col.5; 4-21)

3. Regarding claim 3, Souissi disclose all the particulars of the claim except whether a handoff is needed. However, Song teaches in an analogous art, that the mobile communication terminal according to claim 1, wherein said determining section compares the distance calculated by said distance computing section with a predetermined threshold value and, on the basis of the result of the comparison, determines whether a handoff is needed. (col.9; 3-14) Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include whether a handoff is needed in order to provide a timely drop-off or smooth handoff to another base station.

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4. Regarding claim 4, Souissi disclose all the particulars of the claim except whether a handoff is needed. However, Song teaches in an analogous art, that the mobile communication terminal according to claim 1, wherein said determining section includes a threshold value setting section which sets variably a threshold value corresponding to the radio communication area each base station covers, and a comparing section which compares the distance calculated by said distance computing section with the threshold value set by said threshold value setting section and, on the basis of the comparison, determines whether a handoff is needed. (col.9; 3-14) Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include whether a handoff is needed in order to provide a timely drop-off or smooth handoff to another base station.

5. Regarding claim 5, Souissi disclose the mobile communication terminal according to claim 4, wherein said threshold value setting section extracts information representing the size of the radio communication area the base station covers from the system information transmitted from the base station and, on the basis of the extracted information, sets the threshold value corresponding to the base station. (col.4; 28-41 & col.5; 22-41)

8. Regarding claim 8, Souissi disclose all the particulars of the claim except whether a handoff is needed. However, Song teaches in an analogous art, that the mobile communication terminal according to claim 1, wherein said determining section includes a sensing section which senses the movement speed of the terminal, a setting section which sets a determining period according to the movement speed sensed by the sensing section, and a determination executing section

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which determines whether a handoff is needed periodically according to the determining period set by the setting section. (col.9; 3-14) Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include whether a handoff is needed in order to provide a timely drop-off or smooth handoff to another base station.

9. Regarding claim 9, Souissi disclose a mobile communication terminal (122; fig.2)

comprising:

a receiving section (208; fig.2) which receives, from a base station to which the terminal is connected via a radio channel, first position information representing the position of the base station; (col.3; 62-col.4; 4)

a position sensing section (224; fig.2) which senses second position information representing the position of the terminal; (col.3; 62-col.4; 8 & col.5; 4-21)

a distance computing section (230; fig.2) which calculates a distance from the base station to the terminal on the basis of the first position information received by said receiving section and the second position information sensed by said position sensing section; (col.4; 18-27)

a determining section (236; fig.2) which, determines whether a handoff is needed on the basis of the distance calculated by the distance computing section; (col.4; 28-41) and

Souissi fails to disclose whether a handoff is needed. However, Song teaches in an analogous art, that a handoff executing section which executes a handoff process when said determining section has determined that a handoff is needed. (col.9; 3-14). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include whether a

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handoff is needed in order to provide a timely drop-off or smooth handoff to another base station.

12. Regarding claim 12, Souissi disclose all the particulars of the claim except whether a handoff is needed. However, Song teaches in an analogous art, that the mobile communication terminal according to claim 9, wherein when the mobile communication terminal can be selectively connected via the radio channel to a plurality of base stations belonging to the same mobile communication system, said handoff executing section, if said determining section has determined that the handoff is needed, executes a second handoff process of switching the connection of the terminal from the base station to which said mobile communication terminal is now connected to another neighboring base station belonging to the same mobile communication system. (col.9; 3-14). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include whether a handoff is needed in order to provide a timely drop-off or smooth handoff to another base station.

Claims 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Souissi & Song further in view of Kito [US 6608823] (hereinafter Kito).

6. Regarding claim 6, the above combinations disclose all the particulars of the claim except the identification information about the base station to which the terminal is connected. However, Kito teaches in an analogous art, that The mobile communication terminal according to claim 4, wherein said threshold value setting section has a first memory which stores the information

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representing the size of the radio communication area the base station covers in such a manner that the information corresponds to identification information about each base information, and on the basis of the identification information about the base station to which the terminal is connected, reads the information representing the size of the radio communication area corresponding to the base station from the first memory and, on the basis of the read-out information, sets the threshold value corresponding to the base station. (fig.4; col.6; 46-59 & col.7; 5-50) Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include the identification information about the base station to which the terminal is connected in order to provide the base station which covers the dedicated area.

7. Regarding claim 7, the above combinations disclose all the particulars of the claim except the identification information about the base station to which the terminal is connected. However, Kito teaches in an analogous art, that The mobile communication terminal according to claim 4, wherein said threshold value setting section has a second memory which stores the threshold value preset according to the radio communication area the base station covers in such a manner that the threshold value corresponds to each piece of identification information about a plurality of base stations, and on the basis of the identification information about the base station to which the terminal is connected, reads the threshold value corresponding to the base station from said memory. (fig.4; col.6; 46-59 & col.7; 5-50) Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include the identification information about the base station to which the terminal is connected in order to provide the base station which covers the dedicated area.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Souissi & Song further in view of Rudrapatna et al. [US 6052598] (hereinafter Rudrapatna).

10. Regarding claim 10, the above combinations disclose all the particulars of the claim except a predetermined waiting time. However, Rudrapatna teaches in an analogous art, that The mobile communication terminal according to claim 9, wherein said handoff executing section permits a second handoff process after a predetermined waiting time has elapsed since a first handoff process was executed. (col.5; 11-37) Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include a predetermined waiting time in order to provide an estimated time for handover.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Souissi & Song further in view of Palamara [US 6654362] (hereinafter Palamara).

11. Regarding claim 11, the above combinations disclose all the particulars of the claim except using a radio communication scheme different from that of said first mobile communication system. However, Palamara teaches in an analogous art, that the mobile communication terminal according to claim 9, wherein when the mobile communication terminal can be selectively connected via a radio channel to a base station in a first mobile communication system and a base station in a second mobile communication system using a radio communication scheme different from that of said first mobile communication system, said handoff executing section, if

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the determining section has determined that the handoff is needed, executes a first handoff process of switching the connection of the terminal from the base station in said first mobile communication system to which said mobile communication terminal is now connected to the base station in said second mobile communication system. (col.4; 10-28). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include using a radio communication scheme different from that of said first mobile communication system in order to comply with different wireless communication standards.

Claims 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Song in view of Souissi.

13. Regarding claim 13, Song disclose a handoff control method (abstract) comprising: causing a base station to notify a mobile communication terminal of first position information representing the installation position of the base station; (col.8; 59-66) calculating the distance between said base station and said mobile communication terminal on the basis of said notified first position information and said sensed second position information; and determining on the basis of the calculated distance whether a handoff is needed. (col.9; 3-14)

Song fails to disclose causing the mobile communication terminal to sense second position information representing the position where the mobile communication terminal exists. However, Souissi teaches in an analogous art, that causing the mobile communication terminal to sense second position information representing the position where the mobile communication terminal exists; (col.3; 62-col.4; 8 & col.5; 4-21). Therefore, it would have been obvious to one

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of ordinary skill in the art at the time of invention to include causing the mobile communication terminal to sense second position information representing the position where the mobile communication terminal exists in order to provide a handoff to another base station.

14. Regarding claim 14, Song disclose a handoff control method (abstract) comprising: causing a base station to notify a mobile communication terminal of first position information representing the installation position of the base station; (col.8; 59-66) calculating the distance between said base station and said mobile communication terminal on the basis of said notified first position information and said sensed second position information; determining on the basis of the calculated distance whether a handoff is needed; (col.9; 3-14) and executing a handoff process of switching the base station to which the mobile communication terminal is now connected to another one if it has been determined that a handoff is needed. (col.9; 3-14)

Song fails to disclose causing the mobile communication terminal to sense second position information representing the position where the mobile communication terminal exists. However, Souissi teaches in an analogous art, that causing the mobile communication terminal to sense second position information representing the position where the mobile communication terminal exists; (col.3; 62-col.4; 8 & col.5; 4-21). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include causing the mobile communication terminal to sense second position information representing the position where the mobile communication terminal exists in order to provide a handoff to another base station.

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Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Song & Souissi further in view of Rudrapatna et al. [US 6052598] (hereinafter Rudrapatna).

15. Regarding claim 15, the above combinations disclose all the particulars of the claim except a predetermined waiting time. However, Rudrapatna teaches in an analogous art, that The handoff control method according to claim 14, further comprising permitting a second handoff process to be executed after a predetermined waiting time has elapsed since a first handoff process was executed. (col.5; 11-37) Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include a predetermined waiting time in order to provide an estimated time for handover.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sharad Rampuria whose telephone number is 703-308-4736. The examiner can normally be reached on Mon-Fri. (9:00-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Trost can be reached on 703-308-5318. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4700.

Sharad Rampuria
July 23, 2004


WILLIAM TROST
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600